

Appln. No.: 10/812,942
Amendment dated September 6, 2005
Reply to Office Action of June 3, 2005

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A system for controlling navigation of a data file, comprising:

an input device having a user-actuated rotational input mechanism for generating signals representative of input events;

detection means for detecting a rate of user actuation of said mechanism, wherein said rate of user actuation comprises a rotational speed of said rotational member;

determination means for determining a data file navigation rate representing a navigation amount per input event as an increasing exponential function of the detected rate of user actuation; and

output means for outputting control signals indicative of said navigation rate,
wherein the system is adapted to monitor a direction of rotation of the rotational member, and when the direction of rotation of the rotational member changes the scroll rate is fixed at a default value for a predetermined amount of time.

Claim 2 (original): The system of claim 1, wherein said determination means rounds the data file navigation rate up to a predetermined level when the data file navigation rate would otherwise be less than the predetermined level.

Claim 3 (Canceled)

Claim 4 (Currently Amended): The system according to ~~claim 3~~ claim 1, wherein said rotational member comprises a wheel.

Claim 5 (Canceled).

Claim 6 (Currently Amended): The system according to claim 3, ~~wherein the system is adapted to monitor a direction of rotation of the rotational member, and wherein a first exponential~~

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function is used when scrolling in a first direction and a second exponential function, different from said first exponential function, is used when scrolling in a second direction.

Claim 7 (Currently Amended): A method for controlling navigation of a data file, comprising the steps of:

detecting a rate of user actuation of a user-actuated rotational input mechanism that generates signals representative of input events on an input device;

determining a data file navigation rate representing a navigation amount per input event as an increasing exponential function of the detected rate of user actuation, wherein said rate of user actuation is a rotational speed of said rotational member, and wherein said data file navigation rate comprises a scroll rate; and

outputting control signals indicative of said navigation rate,

rounding the data file navigation rate up to a predetermined level when the data file navigation rate would otherwise be less than the predetermined level,

monitoring a direction of rotation of the rotational member; and

fixing the scroll rate at a default value for a predetermined amount of time when the direction of rotation of the rotational member changes.

Claim 8 (Canceled)

Claim 9 (Canceled)

Claim 10 (Currently Amended): The method of ~~claim 9~~claim 7, wherein said rotational member comprises a wheel.

Claim 11 (Canceled)

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Claim 12 (Currently Amended): The method of ~~claim 9~~claim 7, wherein a first exponential function is used when scrolling in a first direction and a second exponential function, different from said first exponential function, is used when scrolling in a second direction.

Claim 13 (original): A computer readable medium storing computer readable instructions that perform the method of claim 7.

Claim 14 (Currently Amended): A method for controlling scrolling of a display of a data processing system, comprising:

detecting a current rate of user actuation of a ~~scroll control wheel~~ input mechanism that generates signals causing the data processing system to scroll information displayed on the display, said detecting comprising steps of:

receiving a first scroll event resulting from user actuation of the scroll control input mechanism;

receiving an immediate next scroll event resulting from user actuation of the scroll control input mechanism; and

determining an amount of time lapsed between the first and next scroll events, and
determining a scroll rate representing a navigation amount based on the ~~current rate of user actuation~~ amount of time as an increasing exponential function of the detected rate of user actuation;

monitoring a direction of rotation of the scroll wheel; and

when the direction of rotation of the scroll wheel changes, fixing the scroll rate at a default value for a predetermined amount of time.

Claim 15 (Canceled)

Claim 16 (Canceled)

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Claim 17 (Currently Amended): The method of claim 14, wherein the determining the scroll rate step comprises rounding the scroll rate up to a predetermined level when the scroll rate would otherwise be less than the predetermined level.

Claim 18 (Canceled)

Claim 19 (Currently Amended): The method according to claim 14, further comprising:
~~monitoring a direction of actuation of the scroll control input mechanism; and~~
~~wherein a first exponential function is used~~using a first exponential function when actuating the scroll ~~control wheel~~ input mechanism in a first direction and using a second exponential function, different from said first function, ~~is used when actuating the scroll control wheel input mechanism in a second direction.~~

Claim 20 (original): A computer readable medium storing computer readable instructions that, when executed by a processor, perform the method of claim 14.

Claims 21 - 28 (Canceled).

Claim 29 (Currently Amended): A method for accelerated data navigation, comprising the steps of:

determining a rate of user actuation of a multidirectional user-actuated input mechanism;
~~and~~

converting the rate of user actuation into a navigation rate according to an exponential acceleration curve; ~~and~~

detecting a direction of user actuation of the multidirectional user-actuated input mechanism

wherein the converting step comprises forcing the navigation rate to a default value for a predetermined amount of time upon detecting a change in direction of user actuation.

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Claim 30 (Currently Amended): The method of claim 29, ~~further comprising the step of detecting a direction of user actuation of the multidirectional user-actuated input mechanism;~~

wherein the converting step comprises using a first acceleration curve when the multidirectional user-actuated input mechanism is actuated in a first direction, and using a second acceleration curve when the multidirectional user-actuated input mechanism is actuated in a second direction.

Claim 31 (original): The method of claim 29, wherein the converting step comprises rounding up the navigation rate to a predetermined amount when it would otherwise be below the predetermined amount.

Claim 32 (Canceled)

Claim 33 (Canceled)

Claim 34 (Previously Presented): The system of claim 1, wherein the increasing exponential function produces at least three data file navigation rates based on different detected rates of user actuation.

Claim 35 (Previously Presented): The method of claim 7, wherein the increasing exponential function produces at least three data file navigation rates based on different detected rates of user actuation.

Claim 36 (Previously Presented): The method of claim 14, wherein the increasing exponential function produces at least three scroll rates based on different rates of user actuation.